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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/840,917      | 04/25/2001  | Koji Yamamoto        | Q64166              | 5248             |

7590

09/25/2003

SUGHRUE, MION, ZINN, MACPEAK & SEAS  
2100 Pennsylvania Avenue, N.W.  
Washington, DC 20037

EXAMINER

BOS, STEVEN J

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 09/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/840,917

Applicant(s)  
Yamamoto et al

Examiner  
Steven Bos

Art Unit  
1754



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Aug 6, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 5-10 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 1754

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill '964.

Hill suggests the instantly claimed process of pulverizing alumina having the instantly claimed purity and surface area in an vibratory ball mill or an attritor mill, ie. stirring mill, in an air atmosphere to form a powder of the alumina. See example II and cols. 3,4. Absent a showing of criticality, the amount of air and alumina to add would appear to be an optimization well within the level of skill of one of ordinary skill in the art. Because Hill teaches the use of the same type of mill instantly claimed it would appear to also have the same energy consumption as is instantly claimed. Alternatively, absent a showing of criticality, the amount of energy is a variable that is taught at col. 4, lines 27-35 to be an optimization within the level of skill of one or ordinary skill in the art.

Applicant's arguments filed August 6, 2003 have been fully considered but they are not persuasive.

Applicant states that Hill does not teach or suggest that milling is carried out during introducing continuously the inorganic oxide and the gas into the pulverizer.

Art Unit: 1754

However continuous operation of a taught batch process is well within the level of skill of one of ordinary skill in the art, In re Dilnot 138 USPQ 248. Absent a showing of criticality, the amount of air and alumina to add would appear to be an optimization well within the level of skill of one of ordinary skill in the art.

Applicant performs a calculation of the volume of the mill used in Hill that uses a volume ratio of 25,000.

It is unclear where this came from since the instant claims appear to require a volume ratio of 25,000 divided by 100 which is the ratio of the volume of inorganic oxide to the volume of the gas.

Applicant states that the density of an alumina ceramic obtained in example 6 is 3.95 wherein the specific energy consumption is 0.64 kWh/kg whereas the density of an alumina ceramic obtained in comparative example 1 is 3.87 wherein the specific energy consumption is 1.08 kWh/kg.

However the instant claims are not commensurate in scope with instant example 6 therefore this argument is not persuasive..

Applicant states that the ratio of pulverizing time/feed rate of instant example 1 is different from that of example 1 of Hill.

However the instant claims are not commensurate in scope with instant example 1 therefore this argument is not persuasive.

Art Unit: 1754

The instant claims do not exclude the cold bonding of Hill. The present invention is not different from Hill with regard to the effects of a step operated in a medium-stirring pulverizer because pulverization of the inorganic oxide occurs in each case.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Bos whose telephone number is (703) 308-2537. The examiner is on the increased flexitime program schedule and can normally be reached between 8AM and 6PM Monday through Friday. The FAX No. for amendments is 703-872-9306. Any inquiry of a

Art Unit: 1754

general nature or relating to the status of this application should be directed to the receptionist  
whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read 'S. Bos', is positioned above the printed name.

Steven Bos  
Primary Examiner  
Art Unit 1754